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This project is based on ongoing efforts by GTI and EWI to improve field welding and coating practices. This combined expertise, data, and experience will be augmented by pipeline welding contractors, operators and coating manufacturer application partners.

During the second quarter of the project:

GTI/EWI continued researching current in-field welding and coating practices. Literature search included topics such as welding of pipelines, specification of line pipe, guide for welding mild steel pipe, and pipeline joint coating (e.g., API 1104, API 5L, ASME B31.3, ASME B31.4, AWS D10.12, NACE RP0105-2005, RP0178-2003, RP0303-2003, and SSPC-PA 1). A paper and internet versions of survey questions were developed to assess existing approaches and practices that affect the integrity and quality of field applied coatings during pipeline welding and construction. This included questions pertaining to hot tap branch connections and repair devices and coating system failures at field joints and appurtenances. GTI/EWI collected survey data from 101 survey respondents. This data will be summarized in the next quarter and delivered to DOT.

Once the survey is completed, GTI/EWI will develop protocols to improve welding-coating coordination. GTI/EWI and partners will weld and coat test sections using the existing and improved protocols and validate improvements with accelerated corrosion/coating tests. GTI/EWI will develop field protocols to improve (1) welding and field application practices and (2) coordination between the welders and coaters. This may include changes to current welding and post-welding procedures, coating surface preparation and application procedures, and coating selection. A set of clear/concise recommendations will be submitted for incorporation into consensus guides and recommended practices (e.g., NACE/SSPC, AWS, API, AGA, etc.)

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